

Amendments to the Claims:

1. (previously presented) A powder blend for use in a laser sintering process comprising:
a steel alloy of about 88.75 to about 92.75 percent by weight selected from the group consisting of a mild steel alloy, a carbon steel and a stainless steel;
a polymeric binder from about 1.25 to about 2.25 percent by weight; and
a high melting temperature fine metallic, intermetallic, or ceramic particulate of greater than about 5 percent and less than about 15 percent by weight.
2. (previously presented) The powder blend according to claim 1 wherein the steel alloy ranges in size from less than about 90 microns to about 4 microns.
3. (previously presented) The powder blend according to claim 2 wherein the steel alloy ranges in size from less than about 75 microns to about 8 microns.
4. (previously presented) The powder blend according to claim 2 wherein the steel alloy is less than about 45 microns.
5. (previously presented) The powder blend according to claim 1 wherein the steel alloy is spherical.
6. (previously amended) The powder blend according to claim 2 wherein the high melting temperature fine metallic, intermetallic, or ceramic particulate has a particle size less than about 10 microns.
7. (previously presented) The powder blend according to claim 6 wherein the high melting temperature fine particulate has a particle size less than about 2 microns.
8. (canceled)

9. (currently amended) The powder blend according to claim 8 claim 7 wherein the high melting temperature fine particulate comprises about 8 weight percent of the powder blend.

10. (previously presented) The powder blend according to claim 1 wherein the polymeric binder is a thermoplastic or a thermoset.

11. (previously presented) The powder blend according to claim 1 wherein the polymeric binder is selected from the group consisting of polyethylene, polypropylene, polyacetal, polymethacrylate, polyvinylacetate, nylon, wax, phenolic and combinations thereof.

12. (previously presented) The powder blend according to claim 11 wherein the polymeric binder is nylon.

13. (previously presented) The powder blend according to claim 12 wherein the nylon is one selected from the group consisting of polymers and co-polymers of nylon 6, nylon 9, nylon 10, nylon 11, and nylon 12.

14. (previously presented) The powder blend according to claim 1 further comprising a flow agent.

15. (previously presented) The powder blend according to claim 14 wherein the flow agent is fumed silica.

Claims 16-31 (canceled)

32. (previously presented) The powder blend according to claim 9 wherein the high melting temperature fine particulate is tungsten carbide.

Claim 33 (canceled)

34. (currently amended) The powder blend according to claim 1 wherein the high melting fine metallic, intermetallic, or ceramic particulate is selected from the group consisting of tungsten, tantalum, hafnium, rhenium, molybdenum, titanium aluminide, silicon carbide, tungsten carbide, boron carbide, alumina and diamond.

35. (previously presented) The powder blend according to claim 1 wherein the steel alloy is a mild steel alloy.

36. (new) A powder blend for use in a laser sintering process comprising:
a spherical steel alloy of about 88.75 to about 92.75 percent by weight selected from the group consisting of a mild steel alloy, a carbon steel and a stainless steel;
a polymeric binder from about 1.25 to about 2.25 percent by weight; and
a high melting temperature fine metallic, intermetallic, or ceramic particulate of greater than about 5 percent and less than about 9 percent by weight.

37. (new) The powder blend according to claim 36 wherein the spherical steel alloy ranges in size from less than about 90 microns to about 4 microns.

38. (new) The powder blend according to claim 37 wherein the spherical steel alloy ranges in size from less than about 75 microns to about 8 microns.

39. (new) The powder blend according to claim 2 wherein the spherical steel alloy is less than about 45 microns.

40. (new) The powder blend according to claim 37 wherein the high melting temperature fine metallic, intermetallic, or ceramic particulate has a particle size less than about 10 microns.

41. (new) The powder blend according to claim 40 wherein the high melting temperature fine particulate has a particle size less than about 2 microns.

42. (new) The powder blend according to claim 40 wherein the high melting temperature fine particulate comprises about 8 weight percent of the powder blend.

43. (new) The powder blend according to claim 36 wherein the polymeric binder is a thermoplastic or a thermoset.

44. (new) The powder blend according to claim 36 wherein the polymeric binder is selected from the group consisting of polyethylene, polypropylene, polyacetal, polymethacrylate, polyvinylacetate, nylon, wax, phenolic and combinations thereof.

45. (new) The powder blend according to claim 44 wherein the polymeric binder is nylon.

46. (new) The powder blend according to claim 45 wherein the nylon is one selected from the group consisting of polymers and co-polymers of nylon 6, nylon 9, nylon 10, nylon 11, and nylon 12.

47. (new) The powder blend according to claim 36 further comprising a flow agent.

48. (new) The powder blend according to claim 47 wherein the flow agent is fumed silica.

49. (new) The powder blend according to claim 42 wherein the high melting temperature fine particulate is tungsten carbide.

50. (new) The powder blend according to claim 36 wherein the high melting fine metallic, intermetallic, or ceramic particulate is selected from the group consisting of tungsten, tantalum, hafnium, rhenium, molybdenum, titanium aluminide, silicon carbide, tungsten carbide, boron carbide, alumina and diamond.

51. (new) The powder blend according to claim 36 wherein the steel alloy is a mild steel alloy.